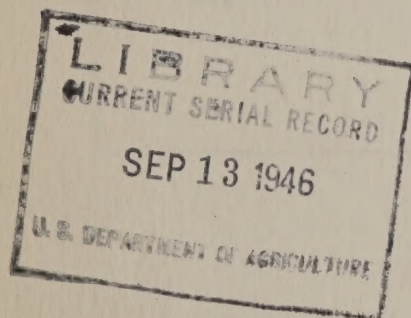


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LABOR UTILIZATION ACTIVITIES



Excerpts from
Reports of
State Extension Services

UNITED STATES DEPARTMENT OF AGRICULTURE
Extension Service Farm Labor Circular No. 34
August 1946

LABOR UTILIZATION ACTIVITIES

Foreword

If there is any miracle or mystery about how American agriculture has managed to turn in 5 years of record production in the face of dwindling supplies of labor, part of the achievement is explained by the willingness of farmers to use inexperienced help; by the clever labor-saving ideas, methods, and devices which farm people have developed; and by the way they have worked together to make every hour of labor and every piece of equipment count.

The purpose of this report is to present some of the things which have been done by the Extension Service under the farm labor program to "help farmers help themselves" in this task of getting more work done with less help to do it.

* * * * *

Contents

	<u>Page</u>
Labor-Saving Equipment Program in North Dakota.....	1
Local Exchange of Labor and Equipment in North Carolina	9
Training and Supervision of Youth Platoons in Oregon...	13
Training Seasonal Farm Labor in Colorado.....	17
Better Work Methods in New York.....	23
Farm Work Simplification Activities in Kentucky.....	31
Labor-Saving and Safety Caravan in Wisconsin.....	39

LABOR RELATIONS ACTIVITY

Summary

It is the purpose of this report to present a summary of the labor relations activity in the State of California during the year 1960. The report is divided into two main parts: a general summary of the labor relations activity in the State, and a detailed summary of the labor relations activity in the various industries. The general summary is divided into three sections: a summary of the labor relations activity in the State, a summary of the labor relations activity in the various industries, and a summary of the labor relations activity in the various occupations. The detailed summary is divided into two sections: a summary of the labor relations activity in the various industries, and a summary of the labor relations activity in the various occupations.

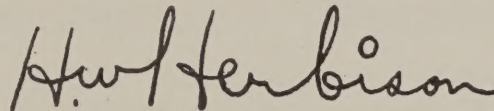
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Summary

1. Labor Relations Department Report to State Board of Labor Relations
2. Labor Relations Department Report to State Board of Labor Relations
3. Labor Relations Department Report to State Board of Labor Relations
4. Labor Relations Department Report to State Board of Labor Relations
5. Labor Relations Department Report to State Board of Labor Relations
6. Labor Relations Department Report to State Board of Labor Relations
7. Labor Relations Department Report to State Board of Labor Relations
8. Labor Relations Department Report to State Board of Labor Relations
9. Labor Relations Department Report to State Board of Labor Relations
10. Labor Relations Department Report to State Board of Labor Relations

LABOR SAVING EQUIPMENT PROGRAM

...Replacement of adult hand labor through the use of labor-saving equipment and mechanized technique proved a lifesaver to North Dakota farmers for seasonal haying and harvest operations. Of all the farm labor program activity in the past 3 years, this phase will probably carry forward into postwar years as the most significant part of the emergency farm labor effort in wartime.

A handwritten signature in cursive script, reading "H. W. Ferbison". The signature is written in dark ink and is positioned below the main body of text.

State Supervisor,
Emergency Farm Labor

LABOR-SAVING EQUIPMENT PROGRAM

(Excerpts From 1944 Annual Report - North Dakota)

Replacement of adult hand labor through the use of labor-saving equipment and mechanized technique proved a lifesaver in 1944 in taking up part of the gap between labor needs and labor available to North Dakota farmers for seasonal haying and harvest operations. Of all the farm labor program activity in the past 3 years, this phase will probably carry forward into postwar years as the most significant part of the emergency farm labor effort in wartime.

There were 7,045 major units of equipment constructed and used out of educational effort of county extension agents and cooperative leaders, which effected a man replacement of 18,003 workers in 1944. Although necessarily "makeshift and emergency in nature," new equipment constructed and used in the hay, grain, potato and sugar-beet harvests is pointing the way to a brand new field of action after the war, in which farmers can relieve their dependence upon seasonal hand labor still further.

Labor-saving equipment, in combination with a lively custom harvesting program, was able to take up the slack between harvest labor available in 1944 and the number that farmers would ordinarily have had to employ to get the work done the old way.

Summary of Results From 1944 Program

<u>Kind of equipment</u>	<u>Number constructed</u>	<u>Estimated man-replacement</u>
Power sweep rakes	2,943	7,801
Power booster bucks	533	1,706
Stackers	1,163	3,225
Beet loaders	26	120
Potato pickers	81	306
Grain elevators	808	1,551
Grain swathers	1,029	2,783
Self feeders	168	178
Post-hole diggers	11	42
Tractor trailers	24	48
Hay loaders	3	15
Power mowers	5	20
Corn pickers	3	30
Miscellaneous items	<u>248</u>	<u>178</u>
Total reported	7,045	18,003

Necessity Drove North Dakota to It

The necessity of finding a new way to put the hay and grain crop away with the "hired man who wasn't there," drove many farm operators into taking full advantage of the research workers of the North Dakota Agricultural College. Early work of the College in finding newer and better ways of getting heavy field work done was carried on actively in 1941 and 1942. Many devices had to be constructed and given trial use back then to find models that would do the job well and lend themselves easily to construction by farmers or local builders from circulars and plans furnished by the county agent or vocational agriculture man.

With the official assignment of emergency farm labor responsibility in 1943, the full resources of the North Dakota Extension Service were turned loose in widespread educational work, arousing interest in, and desire for, labor-saving equipment. Local blacksmiths, implement dealers, Smith-Hughes men and farmers were helped in construction of equipment. Equipment and machines were demonstrated and publicized. Demonstration day programs were held. Most of the agents devoted a solid month of their time to field meetings and demonstrations to spread the gospel of labor replacement in the spring of 1943. Emergency farm labor assistants helped materially.

In spite of the newness of the program county agents reported more than 9,000 hay and harvest workers replaced through equipment built and used out of their local program effort in 1943. Results from extension's cooperative effort in 1944 on this phase of the program doubled that manpower replacement. And there was a lot done on the side in 1944 through efforts of dealers and new manufacturing centers that have sprung up about the State that must be added to the total.

A very valuable byproduct to direct manpower replacement in North Dakota has been the greater opportunity to utilize the services of youth, old men, and women in carrying on field work that ordinarily would require husky adult male workers. Common practice is to put the "youngsters," women and "oldsters" on the tractors and power equipment details, and to save the husky male hands for the grunt and muscle jobs.

Typical County Agent Comment

County Agent Leetun, (Kidder County), has this to say about the labor-saving equipment phase of his 1944 farm labor program, which is rather typical of the average county's activity in this field:

"Considerable effort was extended in the way of labor-saving devices and equipment, particularly the use of a tractor-mounted sweep rake for haying and threshing operations. This was a continuation of the work that was done last year in which demonstrations were held at 18 points in the county on the practical usefulness of this

device. A simple 'bulletin' was circulated which received wide usage. It illustrated how a horse sweep rake could be remodeled over into a tractor-mounted sweep rake. It was conservatively estimated last year that 200 of these sweep rakes were put into use. As a result of this encouragement and information released by this office, at least that many more were built this year by neighbors who saw them operate last year. Through the efforts of the county agent and farm labor assistant, this labor-saving device of a mounted sweep rake has been accepted as a practical means of saving labor in haying and threshing operations."

Haying and Harvest Equipment in Most Demand

Power-mounted sweep rakes and booster bucks were the most popular pieces of labor-saving equipment put into use in each of the past 2 wartime years. Both outfits are used in haying and for handling shocked grain at threshing time. Next in line in popularity and use comes the more conventional hay stacker, using the lift and overshot principle.

Portable grain elevators run a close fourth--this type of equipment getting an especially good play in 1943 in all counties and again in 1944 in part of the State. A new type of home-constructed "auger-type" grain elevator for use in loading and unloading trucks through power take-off was developed by the College and demonstrated extensively this year. More than 800 of this newer type were made and demonstrated.

Slower to catch on and become widely used, but nevertheless a coming device, were big tractor trailers for hauling grain and hay, power post-hole diggers, sugar-beet loaders and power-operated potato picking-sorting tables. Other routine demonstration and result practice reported by county agents involved construction of many self-feeders for livestock, tandem power-mower outfits, home-made swathers, home-constructed corn pickers, and windrow turners to lift and dry swathed grain.

Three-Way Sales Appeal Used by County Agents

Three main selling points have been stressed by county agents and vocational agriculture workers in getting interest and action in the field of labor-saving equipment:

1. Keeping more of the labor dollar at home for other purposes.
2. Enabling the kids or Grandpa to take a man's place in the hay or harvest field.

3. Reducing dependence on variable supply and ability of migrant workers at a time when harvest and haying operations can't wait.

Lesser appeals had to do with taking drudgery out of hot weather work, reducing the number of folks to be fed at the farm table, less dish washing and bed making, doing the job faster to have more chance for leisure or looking after other jobs on the farm.

Postwar Period Will Be One of Mechanization

Only wartime shortages imposed upon manufacturers of farm equipment are holding back greatly increased mechanization of field operations in the production and harvesting of crops in North Dakota. Home-made equipment to save labor has opened up a new demand for something better and a lot more of it as soon as the real thing can be purchased.

Many Combines in Demand

Combine harvesting of small grains and flax will increase materially just as soon as new equipment can be purchased. New combines will materially change the picture of harvesting in areas still depending on the power binder, shocking crew, and threshing machine to handle the small grain crop. Along with this will be purchase of new equipment in the western part of the State to relieve farm operators of depending on out-of-State custom operators coming in to do their harvesting for them. Labor demand for shockers and threshers in North Dakota can be expected to cut off to a trickle within 5 years after the war is over.

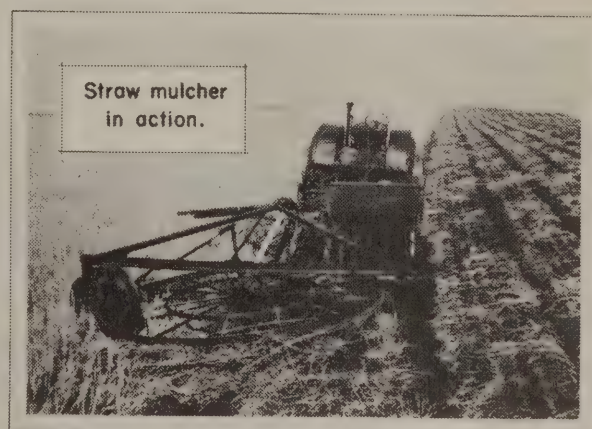
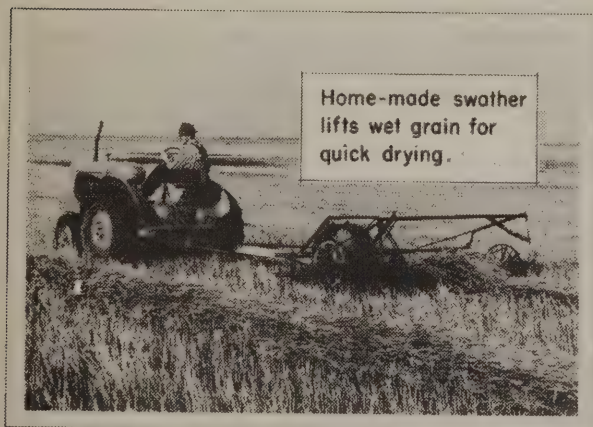
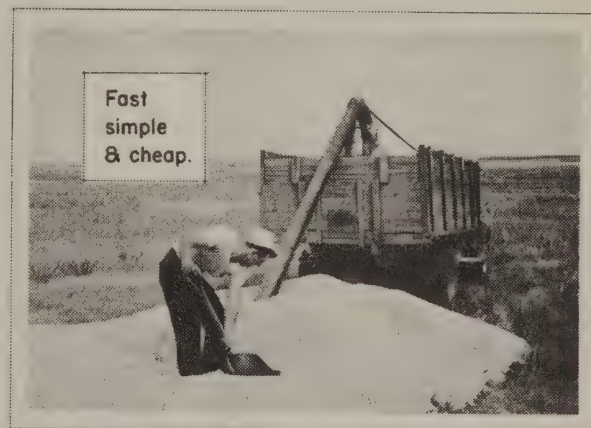
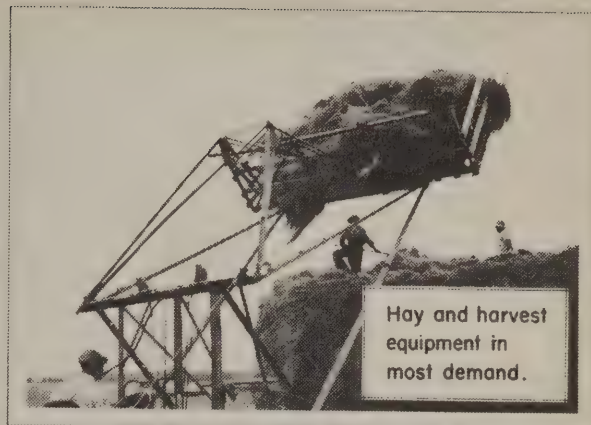
Sugar Beet Industry Will Mechanize

Sugar-beet production in the Red River Valley is just waiting for the opportunity to employ mechanization still further. Machine blocking and cross cultivation are generally practiced now. This has cut hand thinning operations down by one-third to one-half the time it used to take. Segmented seed is used altogether, but in wartime the processing of seed used has not always been what it should be. We need and will have better planting equipment for handling segmented seed as soon as the new "Minnesota Planter" can be put into production and use.

Valley To Be a New Sugar Center

The big labor-saving item on the sugar-beet production horizon in the Red River Valley is the use of new harvesting equipment after the war. With land that lays as level as a floor, and entirely free from pebbles or stones, the Valley is admirably suited to use of power equipment to top, lift, and load beets in one combined operation. Experimental use proves the practicability of this plan once production of new improved harvesting equipment can be had. Many farmers are standing by ready to produce sugar beets on large-scale production

LABOR SAVING EQUIPMENT IN NORTH DAKOTA



methods once they can get equipment to enable them to fit large fields of beets into their farm management system. With natural advantages in soil, climate, topography, size of unit, power and capital, the Red River Valley figures it can give other sugar-producing areas a real run for their money through low unit cost of production. Present plans are for the construction of two new processing plants in the Red River Valley after the war to handle beet production expansion.

Potato Picking Job Can Be Cut in Half

Potato picking and sorting still loom as the toughest hand labor demand to cut down on after the war. However, some progress has been made in the construction and trial use of power-driven picking contraptions. The most common ones demonstrated in Walsh, Grand Forks, Traill, and Pembina Counties involve a big picking platform over which the potatoes are carried by belt or elevator from the digger end, with three workers working from each side, sorting potatoes from the trash and dropping off the filled sacks of potatoes for the loader to pick up.

Most of these machines are still in the "idea stage," but they do demonstrate that six pickers riding the equipment can do the work commonly done by 12 field pickers or more, and, of course, do the job much more easily than previously from the standpoint of physical effort. Principal advantages demonstrated thus far are:

1. Reduction in number of workers hired, fed, and housed.
2. Reduction in sunscald on potatoes.
3. Less bruising and handling of the tuber.
4. Ability to keep harvesting rolling day and night with lights, if necessary.

Principal disadvantages showing up in demonstrations seem to be those of:

1. Clods to be separated from potatoes in heavier soil areas.
2. Less natural corking of potato and more moisture to be removed from warehouse in storage.
3. Occasionally the item of power in heavy soil areas.

After the war production of one of the most satisfactory types is in prospect at Grand Forks or Minneapolis. It will enjoy a good market with larger growers and reduce the total labor demand considerably.

Farmers Hungry for Independence

Throughout the State there is a growing feeling on the part of farm folks to become more independent of seasonal migrant labor in the future and to improve their utilization of family and regularly employed help. Part of this is due to a desire to make farm work easier and more attractive for the young people in the family. There is a growing desire to do more living on the farm and to develop practical work assignments out among the family group. And part of this change in the farmer's future planning is a desire to get out from under dependence on what the usual migrant worker can or can't do in seasonal work.

In each of the past 3 years ability of day labor to fit into work assignments around power equipment and livestock has left much to be desired. More and more the employer has had to mess around with contracts, pay-roll whimsies, wage and hour practice, and training of raw recruits in jobs of short duration to the point where he is ready to change his entire farm management and labor program just as fast as he possibly can. All this has real social significance in the more efficient utilization of family and regularly employed help, and in better living for our farm people.

Along with it will come a great shrinking in the demand for seasonal migrant labor that may be of some concern to those who have to do with the "floating seasonal labor force of this country." Especially will postwar practice impacts be felt by the Spanish-American or Mexican beet worker and the wheat harvest worker who seeks to eke out his little farm's income with seasonal farm work in the harvest fields.

Local Committees Help Push Labor Saving

One hundred twenty-six subcommittees assisted county farm labor committees in carrying out plans and assignments of responsibility in effecting use of labor-saving equipment and exchange of equipment between farmers. Of the 793 demonstration meetings and courses in construction and use of labor-saving equipment, 248 were conducted by county extension agents and 545 by local committee leaders.

Vocational agriculture instructors took an active part in subcommittee activity under the county farm labor committee's planning. Through vocational agriculture cooperation 547 training courses were carried on during the winter months and spring. In many of these special assistance was given in the training and supervision of local men to assist farmers in their community with construction of equipment.

Subcommittees worked with county agents and civic organizations in arrangements, delivery and demonstration of equipment at 33 county-wide round-up demonstration days in 1944. In these county round-ups, programs of interest for youth, women, and men were carried on, and in most instances provision made for refreshments and entertainment through cooperation of civic and service groups in the towns.

Demonstrators and Leaders Find a New Business

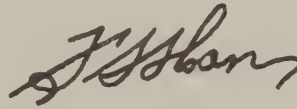
Many folks who started out in 1942 and 1943 as local leaders and demonstrators in developing interest and action in use of labor-saving devices have since helped establish new custom business presently flourishing in the building of equipment for farmers. Three concerns have been set up at West Fargo alone to take advantage of custom order trade. These establishments specialize in booster bucks, stackers, truck lifts, and grain elevators, and carry sidelines of fenceposts, rough lumber, tanks, and brooder houses, as a rule. Similar concerns are growing up in other parts of the State.

At Devils Lake, one of the shops makes a specialty of building tractor-trailers, using bomber wheels and tires available for that purpose. At Knox, a service station does a flourishing business in portable grain elevators constructed on order for farmers. At Maddock, dozens of combination booster bucks and stackers go out on order, and so on across the State.

All this goes to show that once a good idea is past the research and demonstration state the action phase is taken up rapidly by the public and a new service industry created for the public. From there on the main job is to feed new ideas and new equipment into the hopper and watch them catch on and be improved on as more ideas and experience contribute to the making of practical improvements.

LOCAL EXCHANGE OF LABOR AND EQUIPMENT

...One of our biggest jobs throughout the year has been to help people realize and believe that farmers within their neighborhoods and communities could solve most of their problems through an exchange of labor and equipment, and through better utilization of both. In spite of all the obstacles, we believe that this has been one of the most effective as well as profitable phases of the farm labor program in this State.



State Supervisor,
Emergency Farm Labor

LOCAL EXCHANGE OF LABOR AND EQUIPMENT

(Excerpts From 1944 Annual Report - North Carolina)

For this particular phase of the work on assistance to farmers in pooling resources, we were guided mostly by the general policies, as well as actual examples of what could be done. For example, we have operated the labor program in North Carolina on the policy of "trying to help those who helped themselves, provided they couldn't help themselves enough." We have felt that our primary job is to help produce and harvest for national needs. Even though we are particularly interested in seeing that our farmers make a reasonable income, we do not feel under present conditions that we can justify maintaining sufficient labor in any area to make it possible for the farmers to take advantage of the fluctuation in market prices and conditions. This would jeopardize some other crop in another area when the supply of labor is not sufficient to meet all demands.

Local Responsibility

One of our biggest jobs throughout the year has been to help people realize and believe that farmers within their neighborhoods and communities could solve most of their problems through an exchange of labor and equipment, and through better utilization of both. In spite of all the obstacles, we believe that this has been one of the most effective as well as profitable phases of the farm labor program in this State.

Most of this work has been done through neighborhood and other leaders by analyzing with them their neighborhood and community needs as well as their resources, and by assisting them in working out neighborhood and community programs for the exchange of labor, sharing of equipment, custom work, etc.

Publicity on What Farmers Did

We have also found that the best publicity we can give to the farm labor program is to use information from the different counties, giving examples of what has been done, rather than too much publicity coming from the State or Washington office in regard to what will be done for them. If they have the feeling that labor will be obtained from some other source to meet their needs, it is only natural that they wait until this labor is needed before making any plans or arrangements to solve the problem themselves. If this happens sufficient labor cannot be obtained to do the job.

It has been necessary throughout the year to continue to point out to farmers who needed labor that conditions to which we have been accustomed in the past no longer exist. For example, in most instances labor can be exchanged for equipment or for machinery, but cannot be hired for cash.

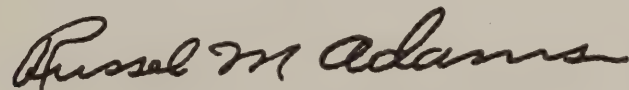
One of the greatest exchanges of labor was experienced during the tobacco harvest where it was necessary to harvest a barn of tobacco as quickly as possible in order to get it cured, the barn emptied and ready to be filled again. We have had a number of reports that farmers within a neighborhood exchanged barns in order to help take care of the crop as it was ready to be harvested. This was particularly true where there was 2 or 3 days' difference in the harvesting of different crops.

Balancing the Labor Load

At the beginning of 1944, a great deal of work was done with farmers in connection with scheduling plantings, selection of enterprises, and other similar work in an effort to help them distribute the labor load on their farms as well as within the neighborhoods. This helped them pool their resources with their neighbors'. We did not make another survey this year in regard to the results of this phase of the program, but it is estimated that the number of man-days devoted by persons exchanging labor and equipment was increased by approximately 20 percent over that which was indicated in 1943.

TRAINING AND SUPERVISION OF YOUTH PLATOONS

...After 2 years' experience in using youth and many inexperienced urban workers, most farmers have gained in appreciation of the value of instruction and training...In general, farmers do not object to time taken by the county farm labor assistant, platoon leader, or cannery field man to teach how the job can be done better by any individual.

A handwritten signature in cursive script, reading "Russell M. Adams". The signature is written in dark ink and is positioned centrally below the main body of text.

Assistant State Farm Labor Supervisor,
Victory Farm Volunteers

TRAINING AND SUPERVISION OF YOUTH PLATOONS

(Excerpts From 1945 Annual Report - Oregon)

The use of youth in platoons under supervision and guidance of a trained and experienced leader has been an important source of labor in Oregon for several years. Special training and careful supervision is the key to the successful use of this type of farm labor.

Supervision of Youth

Of the estimated 31,425 individual youth who worked in the fields during 1945, an estimated 10,000 boys and girls were employed in platoons under adult leadership. Where such adult leadership was not provided, supervision rested in the hands of growers and field bosses and in such help as could be given by the county farm labor assistants.

Where platoons were in operation with well-trained and experienced adult leaders, the children were given necessary care and instruction from the time of boarding the bus or truck for work until they returned to town in the evening. The leader assumed responsibility for discipline, morale, health, and first aid, if necessary, field instruction on how to do the job, assignment to rows, promoting satisfactory relationships between boys and girls and the farmers, carrying out the farmer's instructions, and the many other duties normally required of a field leader of such a group.

These responsibilities of the leaders were generally determined by means of standards set up by a county farm labor youth committee and the desires of the individual growers as to how things should be done. County farm labor assistants spent much of their time assisting leaders with platoons. Adjustments, of course, involved many interviews with the growers and field bosses themselves.

The supervision and instruction of live-ins while in training on the Oregon State College campus was very helpful. After they were placed with a farmer in a county, supervision depended upon the county farm labor assistant who made the placement. This consisted of as frequent visits as possible by the county farm labor assistant to the farm where he interviewed both the boy and the employer. Instances are known where boys who did not make good on the first placements were successfully replaced.

Training of Youth

According to the reports submitted by eight county offices, 9,177 youth received some type of training for agricultural work this year. During 1943 and 1944, orientation courses were prepared by county youth committees and taught by teachers in the schools during the spring. These gave the agricultural facts and explained the national and local

need for the services of youth. The majority of available boys and girls had received this instruction for 2 years and were simply awaiting the opportunity to re-enroll for another season. Therefore, the attitude in most counties was that the Farm Labor Service was not justified in asking the public schools to give a great amount of time to such an effort this year. Consequently, recruitment methods such as described above, without orientation courses of any length, were used.

Topics discussed in these brief youth meetings at the time of enrollment included such things as registration for work, transportation to be provided, lunches, pay, how best to do the job, and reasons for enrolling. Methods of instruction included discussion, moving pictures, illustrations, and demonstrations. The latter was especially used in field instructions. Instruction was given by county farm labor assistants, high school principals and teachers, platoon leaders, farmers, processing field men, and the assistant State supervisor.

The majority of youth enrolled in the schools secured employment as day-hauls, either in platoons or working independently. However, 1,140 live-in youth were reported as having worked in the various counties.

In order to assure continuance of a live-in program 47 high school boys, who had been recommended by their high school principal or county agricultural agent, were accepted for a one week's training and try-out course at Oregon State College this year. Four periods were run, averaging approximately 12 boys each. Through the cooperation of the college faculty these boys received 2 hours of preliminary instruction and orientation at the beginning of each week's period. This was followed by 10 hours in the care and use of farm machinery, especially operation of tractors, 24 hours at the dairy department, including both hand and machine milking, care of utensils and work around the barn, and 9-1/2 hours on the general farm working with tractors, horses, pigs, beef cattle, and on fence construction and other miscellaneous jobs.

Two former Smith-Hughes vocational agricultural instructors each had charge of one-half of the boys in each week's group, giving them supervision and instruction in addition to that provided by the regular college staff.

Training of the Supervisors

More trained leaders of youth groups were available this year than at any previous season. With 143 youth platoons working in 13 counties, some new leaders had to be trained. According to the reports from the counties, 26 training meetings were held. The average length of such meetings was 2.3 hours. The number of leaders trained was 169. Methods of instruction included discussion, motion pictures, bulletins, such as "Your Job as a Work Leader," letters, illustrations, field trips and demonstrations.

The county farm labor assistant in Clackamas County found that placing inexperienced leaders in the field working in a platoon with an older leader for several days proved to be a very effective training



Platoon Leaders receive instruction on a field trip.

YOUTH PLATOONS IN OREGON



A grower looks over the day's record.



Supervision and Instruction on the Job.



A
DAY'S
WORK
WELL
DONE



medium. The prospective leader was thus able to learn by means of both observation and demonstration in an actual job situation.

Assistance Given to Farmers

Where and how to best use youth was discussed by farmer members of county farm labor communities and youth committees in the various counties. In some cases, it was discussed at meetings of growers. Growers experienced in the use of youth, platoon leaders, and county farm labor assistants were present to assist in such discussions.

Most farmers using youth were given assistance through individual conferences with the county farm labor assistant and with platoon leaders. These conferences occurred previous to and during the harvest season, and many difficulties were prevented and ironed out. Where the farmers were able and willing to turn over the management of youth to good platoon leaders, the happiest situation usually existed. Platoon leaders taught largely through demonstration on the job.

Farmers' Attitude Toward the Training of Workers

After 2 years of experience in using youth and many inexperienced urban workers, most farmers have gained an appreciation of the value of some instruction and training. There will always be some who think that they should be able to secure efficient operation by simply assigning an inexperienced worker to a job and telling him what to do without explaining how. Such individuals are always having difficulties in the employment of youth. However, the number of boys and girls who have secured training during previous seasons has lessened this problem even for noncooperating farmers. In general, farmers do not object to time taken by the county farm labor assistant, platoon leader, or cannery field man to teach how the job can be done better by any individual.

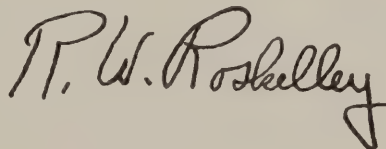
Appraisal of Program

In the opinion of the writer, training of inexperienced workers by means of illustrations, demonstrations, and guidance during the actual performance of the job is absolutely essential if desired efficient help is to be obtained in any reasonable length of time. Our studies made 2 years ago showed that under similar conditions, groups of youth receiving supervision and instruction were at least 10 percent more efficient than those not having these opportunities. This belief in the value of training was strongly supported by observation of what happened in the use of prisoners of war this year. Those prisoners receiving a well-planned organized course of instruction performed far more efficiently than the ones who did not receive this type of treatment.

Training in the beginning of any job is time well spent in the long run for the farmer. Demonstration followed by correction of the learner while performing the job is the most effective method of developing skills.

TRAINING SEASONAL FARM LABOR

...As a result of the instructions given to Mexican nationals on picking beans we were able to increase the average pounds per day picked by each man by approximately 15 percent. In addition, we were able to decrease by approximately 50 percent the loss that occurred to the farmer due to destruction of plants and the leaving of beans. There was almost a perfect correlation between the quantity of beans picked per day and the extent to which the worker observed good picking practices. There is great opportunity for educational work in this field.

A handwritten signature in dark ink, reading "T. W. Roskelley". The signature is written in a cursive style with a large, stylized initial "T" and a long, sweeping underline.

Assistant State Supervisor
Farm Labor Training and
Utilization

TRAINING SEASONAL FARM LABOR

(Excerpts From 1944 Annual Report - Colorado)

Even though Colorado has usually had to import labor in the past the numbers available in the State have been so great that very little attention has been paid to the question of labor efficiency and utilization.

The potential labor shortages that characterized the season of 1944, plus the general interest that has been developed in the results of time and motion study, indicated the desirability of giving special attention to increasing the efficiency of workers.

BEANS

The Situation

A number of Mexican nationals were picking beans--some with fairly good results, while others were very limited in production. Because of pressure that had developed due to limited earnings on the part of some Mexican nationals, it was decided that a study should be made of bean picking, the details of each step, how important these steps were to the picker and the employer, what mistakes were being made, and what would need to be done in order to correct the situation.

What Was Done

In approaching the problem, a film on picking snap beans was purchased from Cornell University. From it, a check sheet was developed indicating the various steps that should be followed by each bean picker. (See next page.) With this check sheet, we went into the field, contacted the farmer and the bean boss, and cooperatively studied the motions and efficiency of each worker. Following the study we arranged with the Office of Labor to present the film on proper methods of picking beans and did some follow-up work in the field.

The production of each person studied was checked 3 days previous to the time of instruction and following the time of instruction in fields which were approximately similar.

Results

As a result of the instructions, we were able to increase the average pounds per day picked by each man by approximately 15 percent. In addition, we were able to decrease the loss that occurred to the farmer, due to destruction of plants and leaving of beans, by approximately 50 percent. The study showed that there was almost a perfect correlation between the quantity of beans picked per day and the extent to which the worker observed good picking practices. There is great opportunity for educational work in this field.

No. _____ Farm _____ Date _____

Check Sheet on Bean Picking

Lbs. picked _____
Hrs. " _____

Emergency Farm Labor Program Colorado State College of A. & M.

1. No. days picked green beans before coming to Colo. _____
2. Total days picked green beans since coming to Colo. _____
3. No. different Colorado farmers for whom you have
picked beans..... _____
4. No. different Colorado farmers on whose place you
have received instructions on picking beans..... _____
5. Total hours instruction received on picking beans _____

Steps in Bean Picking

	: 1	: 2	: 3	: 4
1. Take beans from nearest side of plant first	:	:	:	:
2. Tip plant and strip other side.....	:	:	:	:
3. Complete side before leaving plant.....	:	:	:	:
4. Pick from bottom to top of plant.....	:	:	:	:
5. Complete each plant before moving to next plant.....	:	:	:	:
(Estimate efficiency in working plant: Check: 10-20-30-40-50-60-70-80-90-100)	:	:	:	:
6. Use both hands for picking.....	:	:	:	:
7. Keep hands close together.....	:	:	:	:
8. Equal speed for each hand.....	:	:	:	:
9. Emptying hands part of move to next plant..	:	:	:	:
10. Fill hands before emptying.....	:	:	:	:
(Estimate efficiency in using hands: Check: 10-20-30-40-50-60-70-80-90-100)	:	:	:	:
11. Container within easy reach.....	:	:	:	:
12. Picking in turn and snap motion.....	:	:	:	:

1. Always 2. Usually 3. Seldom 4. Never

POTATOES

The Situation

Although there was no critical labor shortage in potato harvest in the State, there was a consensus of opinion to the effect that the average group of workers wasted a great deal of time and energy in the picking operations. This waste of time and energy occurred at two levels. First, the pickers went through unnecessary motions and expended unnecessary time and energy in traveling excessive distances. Second, this waste of time and energy was due to the kind of machinery the farmer used or the peculiar techniques with which he operated the machinery. In order to obtain further insight into this problem we went into the field with a stop watch and a measuring stick to study the picking processes.

Results

Results of the study indicated the extent to which labor is wasted, and suggested the tremendous need for improving the efficiency of potato picking. An experimental attempt to show the farmers and the pickers the nature and results of their inefficient methods indicated the immensity of the educational task before us and the need for a tremendous amount of educational work to make progress in this field.

SUGAR BEETS

Situation

Colorado saved the harvesting of its sugar-beet crop with a larger proportion of inexperienced labor than was used at any time in the history of the sugar-beet industry. Prisoners of war were available, but to many of them topping sugar beets carried a stigma. The inexperience of camp commanders and farmers in using and handling the prisoners of war presented some of the potential difficulties. Topping sugar beets, unlike some other farm operations, offered many chances to work in an extremely inefficient manner.

What Was Done

1. Preliminary contacts were made with the base camp commanders in order to determine operational procedure and possible instruction that would be most useful in increasing the efficiency of laborers.
2. A set of instructions was developed which was addressed to the farmers employing prisoners of war.
3. A program of training group leaders among prisoners was decided upon but not carried out very effectively.

4. Tasks of accomplishment for prisoners of war through most of the State were determined.

The following procedure was developed for determining the task at the Trinidad Side Camp: In each field a number of representative samples were taken to calculate the stand and estimate the amount of deduction that should be made in the field. This was based on the best judgment of working conditions. The number of beets per acre, condition of soil, condition of tops, and condition of beets after they were plowed out, were the major factors in determining the amount of work that could be done per day per man. Using a basic formula of accomplishment under normal working conditions, a task was worked out for each field by adjusting for stand, lateness of season, shorter days and field conditions.

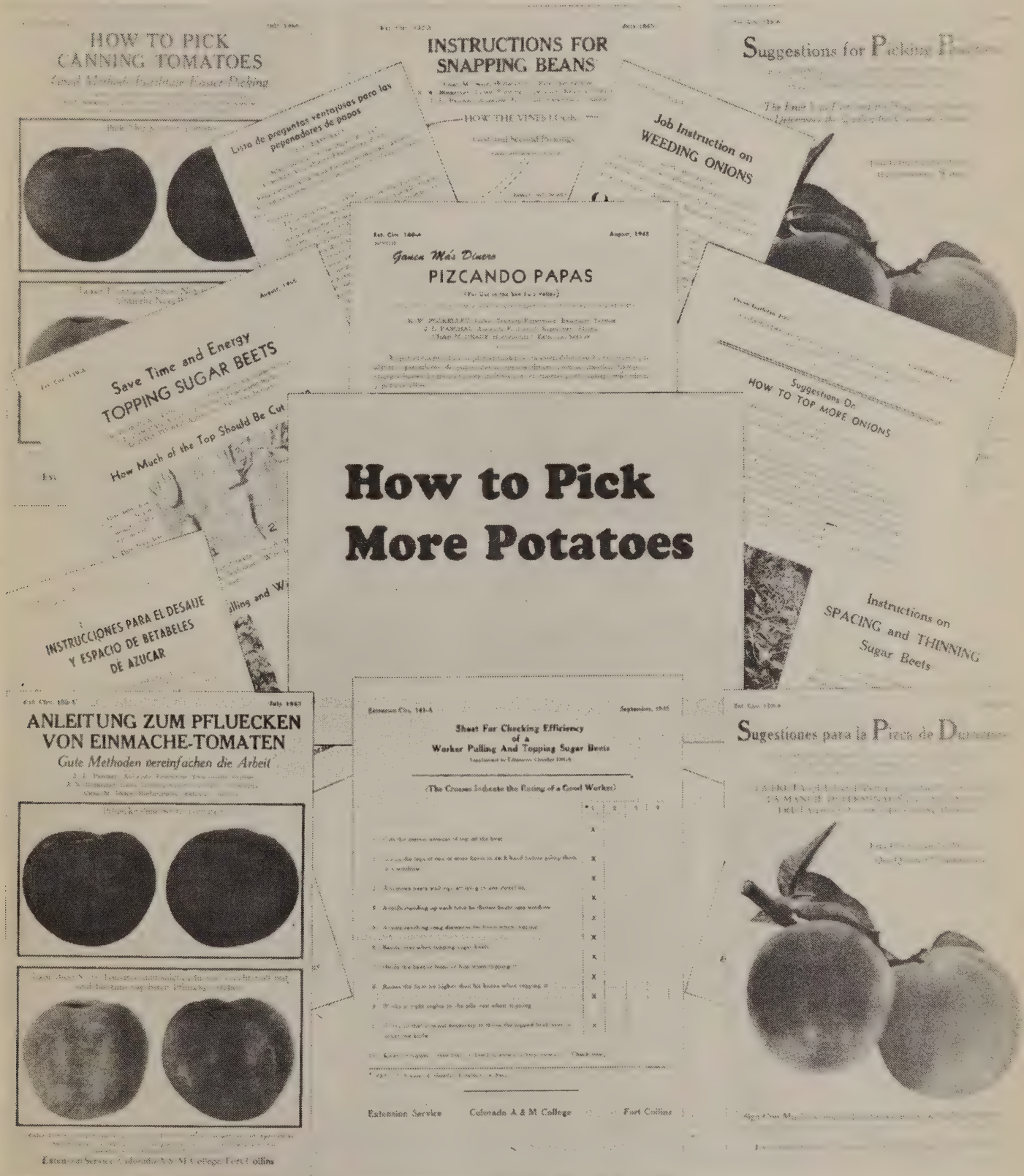
5. Two types of illustrative material were developed for use as instructional material with prisoners of war, Mexican nationals, and Bahamians. The first was an explanation and illustration of the different steps and tasks in topping sugar beets. The right and wrong ways of doing each task were illustrated by pictures and reasons for doing it the right way in contrast to the wrong way were explained. The cost of the wrong way to the person involved was shown as unnecessary work and fatigue. The second type of educational material was motion picture films.

Some Essential Principles To Develop in Preparing Educational Material

Out of the experience of attempting to develop educational material to improve the efficiency of various types of workers, certain fundamental principles loom very important as guides in directing efforts toward increasing production capacity. Some of these principles are as follows:

1. Decide on a comprehensive philosophy and develop a program in relation to it. For example, much publicity regarding the farm labor program is excellent, but much of its value may be lost if the administrative details with reference to handling the program or any phase of the program are not effective. Likewise, education and training may be of less value if administrative details are not given adequate consideration.
2. Prepare educational material and develop a training program on a comprehensive basis ready to go when the time comes. The following groups or individuals are important in the labor-training program: Regular extension service personnel as well as farm labor personnel; Office of Labor, farmers, local and imported labor, army officials, representatives of sponsoring agencies.

SOME TRAINING MATERIALS FROM COLORADO



3. Produce educational material in sufficient quantity to enable as wide a distribution as is necessary for use.
4. Beware of psychological slips in preparing educational material.

Example: German prisoners of war may be more interested in the length of a skirt which a Mexican girl is wearing than her efficiency in topping sugar beets. "Slow motion" to analyze a process may be interpreted as the proper speed of working.

5. Make labor efficiency programs comprehensive.

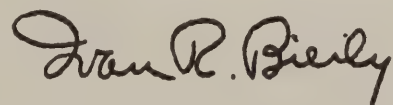
Example: A group of German prisoners of war may be induced to top more sugar beets through adequate recreation or the showing of a Walt Disney picture; or, on the other hand, the efficiency of a Mexican national's production may be hampered considerably through social discriminations in a community, a farmer's failure to handle him with consideration, or delaying pay checks.

6. Adapt the appeals for increasing production to the situation. The same appeal is not applicable to all groups. To the Mexican nationals, the Bahamians, etc., the appeal might be more money; to the German prisoners of war, it might be to save energy--more time for rest; to the farmer, it might be to save his crops or his time.
7. Help the Army develop a program that correlates with a sound program of labor efficiency. Experience this year has shown that the Army is extremely willing to cooperate in following what seems to be the best procedure under the circumstances. They are relatively new at preparing men for farm work and are very willing to follow any constructive program.
8. Help Army personnel understand the nature of the tasks which are required of the prisoners of war, as well as some of the difficulties which the farmers face in the utilization of labor.
9. Devise techniques of soliciting cooperation of prisoners of war and free laborers in working more efficiently.

10. Develop research for educational programs as broad in scope as is necessary for the most effective use of labor. This may involve three phases in the case of picking potatoes: for new workers, the present job might be one of job analysis; for old workers, the educational program might be one of efficiency in terms of time motion due to the expenditure of energy; for the farmer, it might be job analysis in relation to operational efficiency of machinery and labor management.

BETTER WORK METHODS

...Even though each individual farmer is continually searching for a new and better way to do his work, there is not much opportunity for him to observe the methods used by other farmers as they are all busy doing the same jobs at the same time...By studying the methods and devices used by progressive farmers in doing their work, and then preparing moving pictures, pictorial exhibits, and other extension media, these newer methods and ideas may be shown to other farmers.

A handwritten signature in cursive script, reading "Ivan R. Birly". The signature is written in dark ink and is positioned to the right of the main text block.

Extension Economist

BETTER WORK METHODS

(Excerpts From 1944 Annual Report - New York)

One of the major problems of farmers during the year has been to maintain and, where possible, to increase the production of essential farm products with the limited amount of experienced farm help available. Farm wage rates have continued to rise. Limited supplies of farm machinery, fertilizer, and certain other farm supplies have further added to the production problem during 1944.

Farmers, their families, and their hired help, have worked harder than ever before to produce as much as possible. The problem has been one of attempting to increase output per worker without further extending the length of the working day.

With somewhat lower farm prices, but continuing high farm wage rates in prospect during postwar years ahead, farmers recognize that the problem of increasing production per man will be a continuing one, in order that they may continue to enjoy a reasonably high standard of living.

Individual farmers have relatively little opportunity to study the labor-saving methods and devices developed and used by other farmers. This situation is caused by the fact that all farmers are doing the same jobs at the same time. In other words, cows are being milked, poultry is being cared for, and hay is being harvested on all farms at the same time. Thus, even though each individual farmer is continually searching for a new and better way to do his work, there is not much opportunity for him to observe the methods used by other farmers and thus to profit by their experiences.

Purpose of the Project

The objective of this project has been to assist farmers in finding and developing more efficient methods for doing their work. This has been done by studying the methods and devices used by progressive farmers in doing their work, and then preparing moving pictures, pictorial exhibits, and other extension media to show these newer methods and ideas to other farmers.

Attention has been given during the year to several of the major jobs on New York farms, including dairy barn chores, poultry chores, harvesting hay, harvesting corn for silage, potato production and harvesting, picking tomatoes, picking beans, and removal of brush from orchards. Special emphasis has been given to those labor-saving methods and ideas that appear to be generally applicable on farms, rather than to those methods and ideas which appear to be the result of the special situation on a given farm.

All Specialists Cooperated

Because the farmer is just as interested in having a good quality product to use or sell as in doing the job efficiently, it has been important during the year to work closely with farmers and with extension specialists in all departments so that extension materials will show methods which farmers can depend upon to do a good quality job, as well as to save labor. This procedure involves the cooperation of several persons, and for this reason progress has at times been slower than would otherwise have been possible. But this procedure has at least two major advantages: (1) extension materials have been assured of acceptance by farmers, and (2) they will be used more generally by all extension specialists, which assures wider distribution of results among farmers than would otherwise be possible.

County agricultural agents have been informed of results of the studies conducted, and of extension materials prepared, in order that they might make use of them in planning their county extension program. State extension supervisors have been informed of the progress of the work and of extension materials prepared in order that they might work with county extension agents to better advantage on program planning and extension procedure.

Much valuable assistance in the planning for and preparation of visual aids has been received from the Office of Visual Aids of the New York Extension Service.

Special Training Materials Developed

In response to a request from the State supervisor of the extension farm labor program in New York, three short moving pictures were developed. They were used as visual aids in the instruction of inexperienced workers who were employed on farms to pick tomatoes, beans, and to pick up potatoes. Two brief, illustrated bulletins on picking tomatoes and potatoes were prepared for use with the moving picture films.

To the extent that time permitted, some attention was also given to planning for the development of materials that could be used by teachers of vocational agriculture in high schools for their use in assisting farmers as well as their students to find easier and more efficient methods for doing their farm work.

Cooperation With Various Groups

An attempt has also been made to keep interested farm organizations, farm leaders, and commercial concerns acquainted with the nature of this project and with progress of the work. One commercial organization has indicated considerable interest in this type of work, and at present plans to carry on a rather comprehensive study of the possibilities of saving labor through the use of more and better

adapted farm equipment for doing dairy and poultry chores. Consultation with the interested persons in this commercial concern has assisted them in planning and carrying on this work.

Work of a similar nature has been carried on during the year in eleven other States. Cooperation with leaders in other States through exchange of ideas and experiences during the year has been helpful in the development of methods and objectives for this project.

Research and Extension Merged Together

Because extension work in the field of farm work simplification is still very new, it has been necessary during the year to carry on, in part, a combination of research and extension work. In fact, at this stage in its development, these two phases merge together. The research phase of the work has been undertaken to obtain the needed extension material, in the form of time records, moving and still pictures, and other records of farmers' experiences with labor-saving methods and ideas, in order to have them available for use immediately in extension work with other farmers. During the year more than 300 farm visits were made for this purpose.

For the most part, the farms selected for these visits were chosen by county agricultural agents in the several central New York counties where most of this work was done. These counties included Livingston, Cayuga, Onondaga, Seneca, Cortland, Tompkins, Schuyler, Chemung, Tioga, Broome, Chenango, and Oswego County.

Following these farm visits the records were summarized and extension materials were prepared to show how these farmers save time and effort in doing their work. During the year six moving pictures were prepared, 12 radio talks were given, and 12 articles for county extension service publications were prepared, based on the results of this work. In addition, two bulletins were prepared for use in teaching inexperienced workers how to pick beans and tomatoes. Two pictorial exhibits of labor-saving methods were also prepared for use in meetings with farmers.

A brief summary is given of each of the several phases of the extension work in farm work simplification. For each phase of the work, the summary includes a statement of the procedure followed, cooperation received and given, extension materials prepared or to be prepared, and use made of extension materials.

Poultry Chores

The county agricultural agents in Onondago, Cayuga, Tompkins, Cortland, Broome, Tioga, and Chemung Counties each selected five or six poultry farms in their respective counties which they considered to be among the most efficiently operated farms in their counties. An extension poultryman from the college of agriculture visited each

of these farms, and, after examining the way the work was done, eight farms were selected for more detailed study because of the relatively large number of labor-saving methods and ideas that were being used.

In cooperation with the extension poultryman, detailed time and travel records were obtained on these eight farms during 1 day's typical operation. It was found that one of these eight farmers traveled only about half a mile to take care of 1,000 hens in a day, while another traveled more than a mile and a half to do the same job. Specific jobs were selected on each farm to illustrate the labor-saving ideas which these farmers had worked out, and then moving and still pictures were taken of these ideas and methods in order to show them to other farmers.

Based upon the results of this study plans have been made for three moving pictures. The script for the first of these, entitled "Steps Take Time In Watering The Hens," was completed during the year. The other two moving pictures, on feeding hens and on gathering and packing eggs, will be completed early next year. A pictorial exhibit which shows how several New York poultrymen water their hens was also prepared from the results of this work to use in meetings where the exhibit might suggest to other poultrymen some ways to save labor. An extension service letter to farmers on the same subject is being planned for publication early next year.

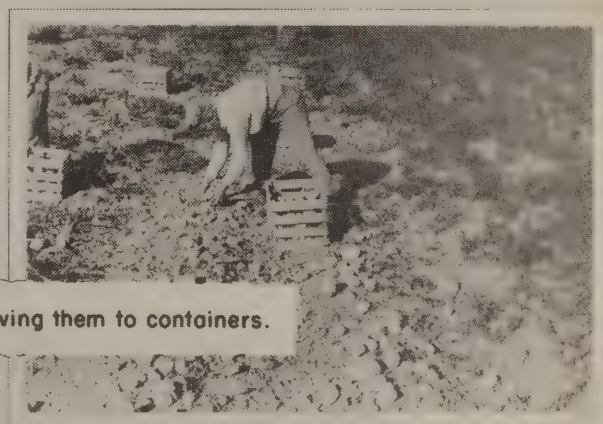
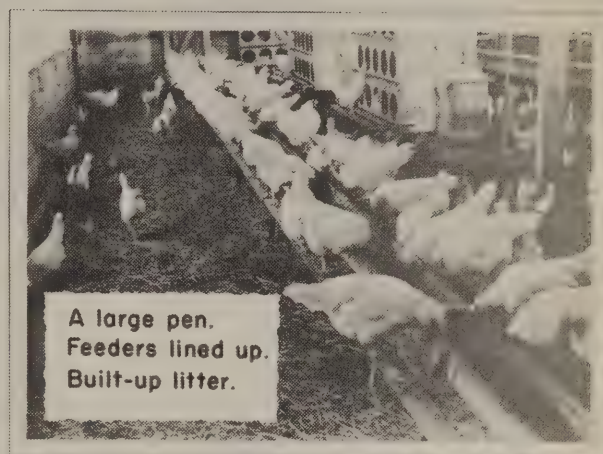
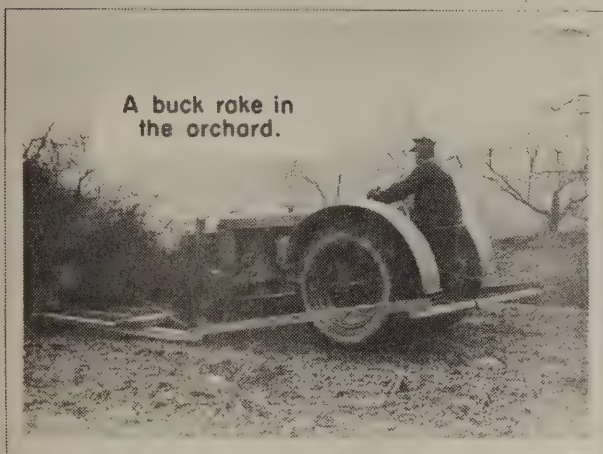
These extension materials will be used by the several extension poultrymen at the college of agriculture, as well as by the extension economist in charge of poultry farm management and marketing, and the economist in charge of the work simplification project. Several radio talks, articles for county extension service publications, and magazine articles were prepared during the year based on the results of this work--some by the extension economist and some by poultry extension specialists.

Dairy Barn Chores

Time and travel records were obtained during the year on 17 typical dairy farms in Tompkins, Cortland, and Chenango Counties. These records were needed for the development of some general standards of accomplishment to use in helping other farmers find the weak points in the work methods they used. At the same time that records were obtained, moving and still pictures were taken of labor-saving ideas in these dairy barns for use in developing extension materials. A moving picture on this subject will be completed during the next year. Seven radio talks, three articles for county extension service publications, and one article for the Dairy Farm Service Letter were prepared from the results of this work.

To do the daily chores in the winter season for 20 cows on one of these farms required 13 man-hours. On another farm only 7 hours a day were required to care for 20 cows. This difference of 6 hours a day adds up to 120 days, or about 4 months of time for a man over the

BETTER WORK METHODS IN NEW YORK



period of 7 months during which the cows are left in the barn. This difference in the time required to care for 20 cows on these two farms illustrates the great opportunity for saving time, as well as travel and hard work, in doing dairy chores. Rearranging the stables and milk houses for greater convenience in doing the work, using more and better adapted equipment, and making better use of milking machines and other equipment are some of the ways that some of these farmers could have saved time and steps.

Harvesting Hay

Harvesting hay is one of the peak labor jobs each summer on New York farms. Based on results of time studies made during the 1943 haying season, and moving pictures taken at the same time, a colored film entitled, "Harvesting Hay" (running time about 20 minutes), was prepared. This film was completed early in 1944, and was shown during the latter part of the period of winter meetings. A special extension service letter entitled, "The Buck Rake Saves Time And Effort In The Hay Field" was prepared and sent to 40,000 farmers. One radio talk and three articles for county extension service periodicals were prepared early in the year to make as much of the information from this work available to farmers as possible.

During the 1944 haying season specialists from the Department of Agronomy and the Department of Agricultural Economics visited about 100 farms. The objective, as in the previous season's work, was to learn about new hay-making ideas from progressive farmers. Time and weight records were obtained on 25 farms where loaders and wagons, buck rakes, trucks, and pick-up balers were used. These records were taken to measure the amount of time required to put in a ton of hay by these different methods, and thus answer one of the major questions which farmers raise about these new hay-making methods.

Additional moving and still pictures were taken. The film, "Harvesting Hay" referred to above, will be revised early next year to include some of these new pictures, and the additional information on the rates at which the hay was being handled by the different methods. Several duplicates will be made.

Some of the newer methods of harvesting hay involve a large cash investment. When these machines are used, some of the labor costs involved with less mechanized methods are replaced with equipment charges. In order to have some complete cost information on these different methods about 90 cost records on different methods of handling hay were obtained from farmers in Livingston and Cortland Counties. This information will be used to answer farmers' questions about costs.

Harvesting Corn for Silage

The records of labor required to harvest corn for silage when using different kinds of equipment, obtained in the fall of 1943, were summarized. Based on this information, and moving pictures taken in

1943, a moving picture entitled "Harvesting Corn For Silage" was prepared. This film illustrates the different methods and emphasizes the difference in labor required to do the job in different ways. The film is in color, with a running time of 15 minutes. It was completed late in the spring, and used at meetings with farmers thereafter. It will be revised early next year and several duplicate copies will be made.

During the year two radio talks and one article for county extension service publications were prepared on this topic.

Potato Production and Harvesting

The moving picture entitled, "More Potatoes With Less Help," prepared last year, was used at 58 meetings during the year, which were attended by about 2,400 persons. Working with the specialists in vegetable crops, some additional moving pictures were taken during the year to be added to the original picture. One radio talk and two articles for county extension service publications were prepared during the year from the results of this work.

In addition, a 300-foot, black and white, 16-mm. moving picture entitled, "Pointers For Potato Pickers" was prepared in response to a request from the extension farm labor office, and was used at meetings to show inexperienced workers how to do this job. One copy of this movie was also loaned to the Labor Utilization Section of the Farm Labor Program in Washington, D. C., for their use at regional farm labor meetings in the United States.

Also prepared from the studies of the way experienced workers pick up potatoes was Extension Bulletin 656, entitled, "Suggestions On How To Pick Up Potatoes." This bulletin was printed (30,000 copies) and made available through county agricultural agents for use in labor camps and with other inexperienced potato pickers. A pictorial exhibit, using enlarged pictures with appropriate legends, was prepared for use in conjunction with the moving picture and bulletin. This exhibit illustrates the same "key points" in doing a good job as are shown in the movie and the bulletin.

All of this work has been done cooperatively with the economist in charge of the extension of vegetable farm management and marketing, and extension specialists in the Department of Vegetable Crops.

Picking Tomatoes

The tomato crop is one of the important vegetable crops in New York for which the extension farm labor program has the responsibility of providing and training a part of the labor needed to harvest the crop. With this problem in mind, the State supervisor of the extension farm labor program requested that a training film be prepared for use with inexperienced workers. To have such a film available for use in 1944 the needed moving pictures were taken from a film prepared at Purdue University, and

adapted, by changing the titles, to New York conditions. Growers and canning factory field men in Orleans County were consulted concerning the changes that were needed. A 200-foot film, 16-mm., black and white, entitled, "Making Movements Count In Picking Tomatoes" was prepared. This film was made available for use by the labor utilization specialist in the extension farm labor program.

Extension Bulletin 655, entitled, "Suggestions To Tomato Pickers" was prepared for distribution among workers. Emphasis was given in this bulletin to the "key points" in doing the job efficiently. Cuts for this bulletin were also borrowed from Purdue University, and the color plate which shows quality considerations that the picker must keep in mind was used through the courtesy of the United States Department of Agriculture.

All of the work of preparing the film and bulletin was done cooperatively with specialists in the Department of Vegetable Crops.

During the 1944 harvest season additional moving pictures were taken in color for the preparation of a colored moving picture on the same subject for use in 1945.

Picking Beans

In response to a request from the State supervisor of the extension farm labor program a 300-foot, black and white, 16-mm. training film was prepared. The title of the film was "Pointers For Bean Picking." The pictures used in the film were borrowed from the Farm Work Simplification Project at the University of Florida. This work was done cooperatively with specialists in the Department of Vegetable Crops. The film was made available to the labor utilization specialist in the extension farm labor program.

Additional moving pictures were taken during the harvest season of 1944 to be used in the preparation of a colored moving picture on the same subject for use in 1945.

Orchard Brush Removal

During the spring of 1944 moving and still pictures were taken of brush pushers and other labor-saving equipment used by farmers to remove brush from orchards. In addition, 50 records were obtained from farmers that indicate the amount of labor saved by the more efficient methods. This work was done cooperatively with the economist in charge of fruit farm management extension, and the assistant county agricultural agent in Wayne County. A moving picture, in color, and an extension circular, will be prepared in 1945 from the results of this study.

FARM WORK SIMPLIFICATION ACTIVITIES

...What can be of more service to farmers than to give them ideas, through which they can help themselves avoid fatigue and useless motions and reject methods, plans, and equipment that are inferior to other opportunities which are within their reach?

Roy E. Proctor

Assistant State Farm Labor Supervisor

FARM WORK SIMPLIFICATION ACTIVITIES

(Excerpts From 1945 Annual Farm Labor Report - Kentucky)

During 1945, farm work simplification has been a major phase of the emergency farm labor program in Kentucky. Through this activity many farm operators have been able to carry on production that would otherwise have been lost to the national economy in the execution of total war.

Techniques and methods of increasing efficiency of labor have been offered to farm people with varying degrees of advantage over presently used methods. Some offered only 5 to 10 percent increase while others offered over 100 percent increase. In total these ideas of work simplification provided tremendous gains, and the wide application of such teaching, during the first year, is highly significant.

A Shortage Stimulated Local Initiative

The facts leading to intensive use of farm work simplification were primarily shortages of farm labor and labor-saving equipment. During 1944 the attempt to mobilize, recruit, and transport workers from areas of less need to areas of greater need offered many problems which were not solved to the satisfaction of workers and employers. This led to the thought that increasing the effectiveness of workers in a given area offered greater possibilities.

Since additional workers and equipment were impossible to secure in many cases, farmers in general were very receptive to any idea which would bring about increased production. Such simple procedures as exchanging labor and machinery in neighborhoods to gain from efficient-sized crews and proper crew coordination, required concentrated effort on the part of local trained leadership. Of even greater difficulty was the problem of showing individual farmers how each worker might increase his own efficiency.

It appeared to the emergency farm labor staff that if farmers were to be helped in 1945, a very intensive educational program needed to be presented. It was necessary to train someone in every county, so they in turn could assist farmers in learning about new ideas, and to demonstrate in a convincing way the advantages to be gained from the whole farm work simplification concept.

Wide Application of Ideas Possible

Had it not been for the fact that farmers were so desperate for improved opportunities of increasing production, it is not likely that even the most excellent teaching could have gotten as wide an application of the work simplification ideas as was obtained. Many farmers had experienced that even if a new man were hired and trained, it was

extremely difficult to keep him on the job for more than a few weeks to a few months. Likewise many farmers were not so situated as to keep extra workers in their homes. It was even more difficult to move families into vacant houses on the farm or in the community.

Farmers were so much concerned with increasing production, and they were so physically tired that it was difficult to maintain the patience needed to fully utilize the inferior labor which was sometimes available. All of this helped to pave the way for eager acceptance of any proposition which would economically improve the production powers of the dependable labor available. Many farmers were so grateful for the improved methods and techniques that they in turn became teacher-leaders for their neighbors.

Excellent Background of Research

Even with this background of fertile conditions for doing a good job of teaching, the farm labor staff could not have proceeded as rapidly except for the excellent research which had been previously, and was currently, in action. During the past few years the research staff, which was concerned with "easier ways to do farm work," discovered new techniques by their own efforts and also found a wide variation in the efficiency of doing certain jobs from farm to farm. Careful unbiased studies of time and motion economy served a most excellent use for leading farmers into attempting new procedures when there was considerable doubt and apathy on their part regarding proposed improvements.

Introductory Farm Meetings

Since the name of this entire concept of farm work simplification was new to most people, it appeared necessary to approach the extension work on an introductory basis. During the months of January through March a great deal of State-wide publicity was given toward acquainting farmers with some of the ideas. Dates were made with various county agents for county and community meetings and these meetings were widely publicized.

The introduction to farmers was in the form of general county-wide meetings with the county agent taking the lead in publicity to get attendance. At each meeting the discussion centered around time and motion economy. The inspiration to look for economies on the "home farm" came through the showing of the sound movie of "Farm Work Simplification" prepared by the Sinclair Refining Company. Simple devices for making farm jobs easier were displayed and explained only to the extent that they could be duplicated in the farm shop.

Additional movies, showing some farm job made easier, were used in these county meetings by selecting from seven choices the enterprise in which that specific county was most concerned. The films available for such use were about tobacco, strawberries, hay, dairy cattle, swine, power machinery, and apples. In rare cases two of those movies were shown at the same place. The discussion, led by the assistant State farm labor

supervisor, was centered around the thesis that there is something farmers can do about increased production in the face of labor shortages.

That farm people are greatly interested in learning about farm work simplification was evidenced by attendance, attention, and discussion. Slightly less than 5,000 farm people attended 68 meetings in 52 counties in February and March 1945. The enthusiasm and inspiration of the people at these introductory meetings spread from farm to farm and to other counties so that later work was more easily done.

In introducing farm work simplification by general meetings it was considered important to bring as many ideas as could be readily understood and as time would permit. This meant that in some counties special emphasis was placed on economy in feeding livestock or of storing feed, while in others greater emphasis was placed on selecting the types of farm machinery which required the least amount of manpower and provided the greatest economy of production. Sometimes emphasis was placed on the position of hands and the body posture for picking beans or strawberries, and sometimes the mere handling of tobacco stalks while the leaves were being stripped for market. It was our purpose to introduce enough ideas to encourage farmer thinking toward making farm work less tiresome or to accomplish more with a given expenditure of energy.

Later Work Centered on Tobacco

There were three major reasons why most of the remainder of the farm work simplification activities, as conducted by the emergency farm labor staff, were centered around the production of burley tobacco. First, it is the most important enterprise in Kentucky from the viewpoint of man-labor required. Second, it was the major enterprise for which additional workers had been asked in years before, and third, the principal body of facts obtained by the farm work simplification research staff was centered around burley tobacco production. Therefore, after the subject had been well introduced to the State, it was felt that the next problem was to teach local leaders to thoroughly develop a procedure for presenting work simplification on a major farm job. To this end a careful study was made of the best procedures which had been developed through the research activities, and to prepare charts, movies, and discussion material for the use of these new leaders.

The personnel selected to carry the work simplification method to communities and neighborhoods were the county agents and their assistants in the emergency farm labor program. A full day was spent with these people in small groups in first going through proposed farmer meetings and then explaining to these leaders a great deal of background behind the charts, movies, simple devices, and discussion material. In this way it was considered that each of these county workers was in a position to do an excellent job of carrying that message to his entire county.

Training Program for Transplanting

The single job of transplanting burley tobacco (which is a critical peak for labor requirements) was the theme around this first training program. Four charts were made into a set and provided each county. These charts were wall size. Likewise, suggested news articles, circular letters, invitation leaflets, and discussion material were mimeographed and placed in the hands of each county worker.

The films for showing the most up-to-date procedures for transplanting tobacco so as to economize on farm labor were duplicated so that small groups of counties could have a film for their use in county meetings. Sets of 2 x 2 slides were duplicated for counties not having access to movie projectors. In addition to this training and equipping of county workers, the field agents and supervisors of "farm labor" stood ready to assist in counties where there was some hesitancy on the part of the county worker in attempting to hold a first meeting.

The county worker then carried "prepackaged" work simplification ideas of transplanting tobacco to farm groups. In 94 counties which undertook this project, 631 community and neighborhood meetings were held with an aggregate attendance of over 15,000 farm people. This experience was valuable to the county workers and was of great help to the State "farm labor" staff. The State staff learned from this that much more effective teaching could be done by thoroughly training county workers who were in constant contact with farm people. The efforts of the State staff were more greatly rewarded by preparing materials and training county workers than could possibly have been the reward by carrying these ideas directly to farmers from a State level, as was done in the introductory meetings.

Training Program for Harvesting

The next approach to teaching farm work simplification was built around the two farm jobs of priming and cutting tobacco. The same procedure for equipping and training county workers, as for the transplanting meetings, was repeated. However, there was no hesitancy on the part of county workers as to the significance of their own teaching, or their ability to do the job properly. Therefore, an additional factor was used at these training meetings--that of training farmers to discover for themselves improved methods by analyzing their own jobs. Again movies were used, but with a different approach, in that the usual methods of harvesting were shown first. Then, in various progressive steps, it was shown how analyzing the job led to improved methods.

For example, in placing sticks to receive tobacco as cut, some farmers drive one end of the stick in the ground with a hammer. To avoid this extremely slow method, it was shown that on other farms time was saved if the sticks were pushed in the ground. No hammer was needed and each stick could be placed as needed. By further analysis of methods used it was shown that the energy of pushing the stick could also be

WORK SIMPLIFICATION IN KENTUCKY

Easier Ways To Do Farm Work

Pulling Tobacco Plants

By George B. Byers
Earl R. Young
Ernest J. Nesius



On sample farms in central Kentucky the time taken to pull 8,500 plants ranged from 4 to 14 minutes. This leaflet describes the method doing it the easiest.

Leaflet 73
UNIVERSITY OF KENTUCKY
College of Agriculture and Home Economics
Agricultural Extension Division
Thomas P. Cooper, Dean and Director
Lexington, Kentucky

Easier Ways To Do Farm Work

Machine Setting of BURLEY TOBACCO

By George B. Byers
Earl R. Young
Ernest J. Nesius



SAMPLE FARMS in Kentucky in 1943 in setting burley tobacco ranged from 1 to 2 man-hours per acre. By using the methods found on these farms, 2 man-hours driving should reasonably set 1 acre of tobacco per day, spaced 38 inches apart. The methods used by the farmers in the shortest time is the second in a series (the first is pulling tobacco in Kentucky indirectly).

Leaflet 74
UNIVERSITY OF KENTUCKY
College of Agriculture and Home Economics
Agricultural Extension Division
Thomas P. Cooper, Dean and Director
Lexington, Kentucky

Easier Ways To Do Farm Work

Cutting and Spearling Burley Tobacco

By Ernest J. Nesius
Earl R. Young
George B. Byers



CUTTING 1,000 or more sticks of tobacco day after day is an accomplishment reached by relatively few men. Such men are reached by unusually skillful and rapid workers. Very careful study, of the way 16 such men did this work in 1943, however, showed that the method had a great deal to do with their success. Other men, but using a poor method, did not do so many.

In this leaflet the method and photographs made from one of the most expert men who is already highly proficient of his own procedure with the method.

Leaflet 75
UNIVERSITY OF KENTUCKY
College of Agriculture and Home Economics
Agricultural Extension Division
Thomas P. Cooper, Dean and Director
Lexington, Kentucky

Easier Ways To Do Farm Work

How to Save Time in Priming Burley Tobacco

By George B. Byers
Earl R. Young
Paul M. Pirney



About 20 man-hours of work were saved by farmers in Kentucky who used the method of burley tobacco described in this leaflet.

Leaflet 92
UNIVERSITY OF KENTUCKY
College of Agriculture and Home Economics
Agricultural Extension Division
Thomas P. Cooper, Dean and Director
Lexington, Kentucky

Easier Ways To Do Farm Work

Taking Down, Bulking, Stripping, and Pressing Burley Tobacco

By George B. Byers
Ernest J. Nesius
Earl R. Young



CAREFUL RECORDS (including motion pictures) of the methods used by farmers who are recognized as particularly good at certain operations in stripping burley tobacco are reported in this leaflet, the sixth in a series on easier ways to do farm work. All these leaflets describe the best of the methods observed.

Leaflet 86
UNIVERSITY OF KENTUCKY
College of Agriculture and Home Economics
Agricultural Extension Division
Thomas P. Cooper, Dean and Director
Lexington, Kentucky October, 1944

Easier Ways To Do Farm Work

STRIPPING BURLEY TOBACCO

By George B. Byers
Ernest J. Nesius
Earl R. Young



FARMERS often speak of stripping 100 pounds of tobacco as a good day's work. They know that the amount of tobacco stripped per day is influenced by distance of the bulked tobacco from the stripping room, quality of tobacco, arrangement of pressing facilities, and type of lighting of the stripping room.

In every community a few farmers are recognized as good tobacco strippers and are proud of their records of 150, 200, or even 250 pounds per day. These men often are thought of as having special abilities or knacks. Careful study of 24

Leaflet 84
UNIVERSITY OF KENTUCKY
College of Agriculture and Home Economics
Agricultural Extension Division
Thomas P. Cooper, Dean and Director
Lexington, Kentucky September, 1944

Easier Ways To Do Farm Work

Cutting and Housing BURLEY TOBACCO

By Ernest J. Nesius
Earl R. Young
George B. Byers



This is the fourth in a series on easier farm work. All are based on records (including motion pictures) of methods used by farmers who were particularly good at the particular task named; and all the leaflets describe the best of the methods found.

Leaflet 79
UNIVERSITY OF KENTUCKY
College of Agriculture and Home Economics
Agricultural Extension Division
Thomas P. Cooper, Dean and Director
Lexington, Kentucky July, 1944

eliminated by giving the stick a quick jab into place. This proved to be faster as well as easier.

Likewise, various steps of placing tobacco on sticks involved many waste motions. The question, "Why throw the top end of the plant clear over the upright stick before pushing it on spear?" led to leaning the stick forward. Then, by using a circular motion and striking the plant on the spear, the entire plant was never lifted more than waist high. Speed and ease were thus gained by careful analysis, and the steps of such analyses were shown and discussed.

The fastest and easiest methods were finally shown. This was the basis for a discussion of how farmers may look for opportunities to simplify other jobs. In 89 counties over 30,000 farm people attended these meetings. This was only an adaptation of job methods training. However, farmers are already using this approach to solve many problems regarding the wise use of labor and machinery.

Training Program for Stripping

The final training course for 1945 was conducted in the early fall on the jobs of bulking and stripping tobacco. The same procedure was followed as with the priming and cutting training schools; that is, present methods were put on the movies and step by step the audience was shown how improvements were brought about by analyzing the job and selecting only those phases of the work which fit the individual farm operator. For example, it was shown by charts, discussion, and in the movies how the bulking of tobacco could be reduced from the normal requirements of 13 man-hours per acre to 3 man-hours per acre. The county meetings on this phase of the work extended through October, November, and December.

Publicity Tailored to Meet the Needs

From the State level the procedure on publicity was somewhat different for the four types of meetings. For the introductory meetings, letters of facts and high lights were sent to each county agent 3 or 4 weeks before his meeting. A few suggestions regarding press articles were prepared, in addition to a few suggestions for circular letters and reminder cards. For the series of meetings on transplanting tobacco, this was done in a more formal fashion. A number of suggested press stories, circular letters, and circular cards were mimeographed and handed to each county worker at the training schools. Furthermore, our extension editor sent mats and stories every 2 weeks to all the county papers in Kentucky.

Since there was no training of county workers for the first series, or introductory meetings, they were somewhat different from the three other series of meetings. The principal variations of the three meetings at which county workers were trained had to do with subject matter. For many reasons the first group of meetings was the most

difficult because many of the county workers had little or no concept of how farmers would respond to farm work simplification meetings held in communities by these county workers. Also the transplanting and harvesting meetings required a demonstration of using both movies and slides, since some agents were to use both and other agents in each group were to use one or the other. This required somewhat more time than the demonstration for stripping tobacco, at which no slides were made available. Furthermore, the questions and discussion required much more time at the transplanting series of meetings than at the others because it was a new idea. For this reason a long day was required for this training meeting, and very little time was devoted to the idea of general publicity and individual contacts following the community meetings.

With greater self-assurance on the part of county workers for the third series, or harvesting meetings, less time was required for details and a more liberal amount of time was devoted to publicity and how to use the facts and ideas in presenting farm work simplification to farmers individually. Furthermore, it was planned in the harvesting meetings that priming the ripe leaves from standing stalks was to be a separate operation from the stalk harvesting of tobacco.

For the fourth series of meetings the county workers were so well versed in the general knowledge of farm work simplification and of procedures in publicity that more training was given on the details of economies of the various steps and devices as promoted at that series of meetings. In addition to the training on how to conduct community meetings of this kind, two other members of the extension staff used some time at these training meetings. One of these was an official tobacco grader who discussed the advantages and the methods of proper grading of tobacco and how proper grading fits into the work simplification ideas of stripping. The other member of the staff was an extension economist who discussed the economic background and outlook for the production of tobacco for this year and next.

Teaching Materials to Fit All Requirements

The types of material and literature handed out at each meeting varied with the area within the State. For example, during the introductory meetings in the tobacco counties, leaflets on various phases of tobacco work were presented, as well as drawings of devices which could be made on the farm to save labor. Leaflets on corn production and drawings for simple devices to make corn picking and corn elevating easier were handed out in the corn-producing areas. Models of hog waterers, poultry range feeders, laying house dropping pits and properly made tobacco equipment were provided for each county where that particular equipment was important for the type of farming in that area. Of course, this meant that some counties received each model or piece of equipment which was available as demonstration material.

At all of the training meetings, a full discussion of the charts for that meeting was presented. Then the simple devices for that work were exhibited and explained. For the transplanting meetings each agent was given a model one-man board and shown a basket-plant hamper, a loop-stick sack for carrying plants and a shoulder strap for carrying basket of plants in hand setting. Drawings of each were given in quantities for farmer distribution.

For the harvesting meetings the same loop-stick sack was used for carrying ripe leaves from the field; a stick support and string were exhibited and drawings made available; and a model tobacco housing hoist was exhibited for further questions and refinement. At these meetings also the most efficient tobacco knives and a suckering knife were provided each agent where such device was important. The best available tobacco spear was also exhibited. It was not possible to secure enough of these spears to give one to each county. One was placed with each copy of the film so that every county had one for a few days for its meetings and to encourage a local blacksmith to duplicate it for sale in the county.

At the series of meetings on stripping tobacco, each agent was given a sample self-releasing tobacco lowering hook with drawings to hand to prospects who might make them for farmers. A model stick and stalk rack was exhibited, and drawings for their reproduction on farms were made available in quantities.

At each series of meetings where training was considered important, an abundant supply of each leaflet pertaining to that subject was provided to the counties for farmer distribution. Drawings of recommended labor-saving equipment were also provided.

Many Farmers Were Reached

The interest and attendance at county, community, and neighborhood meetings varied considerably due to variations in local interest, weather conditions, and general publicity given. However, some community meetings were reported with well over 200 people in attendance and a few with over 400. Likewise, there were a few meetings reported with less than 10 people in attendance. To report this by counties and by meetings would require a great deal of space, but the statistical summary following gives the essential facts.

Summary of Attendance at Farm Work Simplification Meetings

Type of meetings	: No. counties : holding meetings	: No. of : meetings	: Attendance
INTRODUCTORY	52	68	4,883
TRANSPLANTING			
Slides	52	179	3,915
Movies	61	236	9,713
Bed demonstrations	51	246	1,811
HARVESTING			
Slides	49	208	5,808
Movies	57	267	9,124
Field priming	89	683	10,934
Field cutting	48	316	4,217
Field combined	2	8	300
STRIPPING			
Movies	45	151	6,153
Barn demonstrations	67	329	6,395
TOTAL		2,691	63,253

LABOR SAVING AND SAFETY CARAVAN

...More effective use of existing material and machines, building of home-made equipment, improvement of production methods, prevention of accidents, and maintenance of morale on the farm were all considered important factors which could be improved by a labor saving and safety caravan...It was not a cure-all or a final answer, but a method of helping to increase efficiency on the farm and in the farm home at a time when a hired man or new machine was a memory of the past and a hope for the future.

A handwritten signature in cursive script, reading "Randall L. Brinson". The signature is fluid and elegant, with a large initial 'R' and a long, sweeping underline.

Farm Safety Specialist

LABOR SAVING AND SAFETY CARAVAN

(Excerpts From a 1944 Report - Wisconsin)

Recognizing the shortage of manpower as well as tools and equipment for food production on the farm, the Labor Section of the Agricultural Extension Service in Wisconsin furnished funds for developing a new approach to these problems--the labor saving and safety caravan. More effective use of existing material and machines, building of home-made equipment, improvement of production methods, prevention of accidents, and maintenance of morale on the farm were all considered important factors which could be improved by a project of this kind. The project was not a cure-all or a final answer, but a method of helping to increase efficiency on the farm and in the farm home at a time when a hired man or new machine was a memory of the past and a hope for the future.

What Was This Caravan of Which We Speak?

This portable show consisted of over 100 items of equipment and methods, some full scale and some models arranged in sections, with 320 lineal feet of plywood panel as a background. The various sections were manned by extension specialists, county extension workers, or farm labor assistants assigned to the job of explaining the equipment displayed and demonstrating methods of improvement in that particular field.

Portable microphones, signs and art work on the panels, together with sound records, helped to tell the story. Collapsible tables, labeled packing boxes, and numbered panels aid in transporting the show on two trucks and two four-wheeled trailers in such a way that the complete display, including tables, panels, sign exhibits, public address system and staging could be set together in 90 minutes and repacked ready for the road at the end of the day in less than 1 hour's time.

Organizing the Display

On January 3 the green light flickered and the first show was scheduled for February 1. This meant 4 weeks in which to hire help, arrange panel background, build models and full-scale equipment, equip trucks, print and distribute publicity, rent a public address system, paint signs and complete the painting and art work on the entire display, and--as they say at an auction--many small items too numerous to mention.

What To Show

Lists of possible exhibits were compiled by conferring with various extension specialists after the plan had been discussed at the extension specialists' luncheon. The list of displays and methods was revised both by adding and by subtracting. Every proposed display of equipment or demonstration of a method was automatically eliminated unless it could be (1) used immediately to save labor on the farm, and (2) produced from material available on the farm or at the local blacksmith shop. For example, the combine saves labor but was not available. Better seed grain is a recognized good practice but not a labor-saving method. Therefore, neither would qualify for the show.

Building Exhibits

Six labor assistants from various counties were called to Madison for a week to assist in putting the exhibit together. They were relieved by six others at the end of each week. Six cabinet shops went to work on models; one artist and two painters started their work; and several blacksmith shops went to work on a hay hoist, a manure loader and a lime sower; while tables, panel legs and many other items made from both wood and iron were being completed in the agricultural engineering shops. Stenographers started on letters and forms to county agents and publicity about the show.

Publicizing the Show

Letters were arranged for the county agent's supervisors, to be sent out to all county agents, explaining the show and establishing a deadline for requests for a show in their area (one show per county). Information on the show was routed to the county agents by a series of letters. One publicity letter for distribution to farmers was furnished to the county agents in quantity, on request.

Local merchants took over and sponsored full-page advertisements in dozens of weekly and daily newspapers. Local radios carried stories about the approaching event. The success of local publicity was entirely in the hands of the county agents.

Arranging for the Show

On the day the green light was given for the show, the first letter was prepared for district supervisors to send to county agents. This letter specified that a request from the county agent must be received by the deadline date of January 10 if his county was to be included in the schedule.

Fifty-three counties snapped back that they wanted the show. This was 13 more than the original plan. The management committee had agreed to only 40, and now the supervisors wanted 53--so we finally "compromised" on 53.

Farmers! Produce More With Less Work!



Come See How You Can Do It At The Big

LABOR-SAVING FARM EQUIPMENT CARAVAN

AT

New Armory, Marshfield
Wednesday, March 14th

10 A. M. TO 4 P. M. ADMISSION FREE!

Showing Over 100 Pieces Of Home-Made
Equipment And Labor-Saving Methods

Every piece of equipment in the Caravan is designed to save time and labor or to promote safety on the farm. Almost all the things on display can be made by farmers. Extension engineers and the various departments of the Wisconsin College of Agriculture have co-operated in assembling the material for this big show. Local entries will also be accepted. See these interesting exhibits! They'll save you a lot of time and labor in the busy days ahead!

Portable Elevator
Chicken Feeder
Chicken Nests
Seed Treater
Grain Drill Basket
Hay Drier Model
A-Drum
Wheel Hoe
Orchard Ladder

Temporary Silo
Barn Cleaner
Wagon
3-Minute Milking Equip-
ment
Electric Chick Brooder
Post Puller
Feed Storage (Chicken
House)

Quick Hitch
Grain Drill Guide
Wood Splitter
Buck Rake
Auto Tractor
Manure Loader
Hay Mower
Rubber-Tired Wheel
Barrow

Feed Cart
Silage Cart
Hay Self-Feeder
Range Poultry Waterer
Box For Minerals
Rinse Pail Carrier
And many, many other
interesting exhibits.

SEE THEM! USE THEM!

This is your opportunity to find out how to build many labor and time saving devices that will help relieve the labor shortage on the farm. Don't miss this big show!

Free Coffee and Wieners Served At Noon!
BY THE MARSHFIELD COMMERCIAL CLUB

This Message Sponsored by These Progressive Marshfield Farm Machinery and Equipment Dealers in Appreciation of the War Efforts of Central Wisconsin Farmers—

Ebbe & Klemme Farm Service
200 E. SIXTH STREET
MARSHFIELD

Farmers Co-operative Prod. Co.
107 E. PEACH STREET
MARSHFIELD

Hughes Service
111 E. FOURTH STREET
MARSHFIELD

Linden Electric Co.
315 N. Central Ave.
Marshfield

Perko Implement Co.
617 E. Central Ave.
Marshfield

Sears Roebuck & Co.
212 E. Central Ave.
Marshfield

OVER
60

VALUABLE
PRIZES
FREE!

To Farmers Attending
This Show!

15 SILVER 15
DOLLARS
GIVEN BY
MARSHFIELD BANK
IN PRIZES FOR SAFETY
QUIZ PROGRAM

Come! Win A Prize!

Something Going On Every
Minute Of The Day!

County Schedule

Following the dose of requests a complete schedule was arranged for the 53 counties. It was impossible to allow the county agent a choice of dates, as all unnecessary mileage had to be eliminated on a schedule calling for five shows per week. Six days after the close of requests the completed date schedule for 10 weeks was sent to each county agent, asking for his acceptance or immediate cancelation, but no change of date was allowed. Not one cancelation was received, and the schedule was carried through for 10 weeks with only two minor changes. One was combining a show for two counties to allow 1 day for equipment repair; the other was the exchange of dates by two adjoining counties.

Along with the schedule of dates to county agents was sent an information sheet to be returned. This sheet asked for a floor plan of the proposed building to be used.

Program

The caravan show usually operated from 10:00 a.m., to 3:30 p.m. Traveling microphones provided the specialists with 5- or 10-minute periods in which to discuss their exhibits--a half hour for a safety quiz, and sometimes a half to three-quarters of an hour for a number of short talks. A proposed schedule was given to the county agents in one of a series of letters. Here again, however, the program of the day was left pretty much to the county extension office. The setting up of the show and taking it down were the limiting factors. While it was there, the show belonged to the county extension office. In most places there was very little in formal talks and no long speeches.

The Safety Quiz

Farm safety plays an important role in labor saving. The thousands of people hurt and killed on farms is a problem that becomes even more acute from an economic standpoint when there is a shortage of labor and equipment.

In order to stress the necessity for farm safety, a quiz program was carried on in connection with the caravan. Money was solicited locally by the extension office, and in most cases silver dollars were awarded to the winners.

At the peak crowd period two traveling microphones were taken out into the crowd. Questions were asked over these traveling microphones. The farmer or farmer's wife giving the right answer was awarded a silver dollar. Over 50,000 farm people were well exposed to the safety problem. Five hundred fifty silver dollars were distributed to the folks giving the right answers.

General Caravan Publicity

Although the responsibility for local publicity was turned over entirely to the county extension office, much enthusiasm was added by State dailies as well as farm magazines through their editorials and picture sections.

The Local Exhibits

Encouraging farmers to exhibit home-made equipment from their own or neighbors' farms was a definite part of the plan for the caravan. The results in this phase of the program varied from no local exhibits to a show that was far better than the ready-made caravan itself. The exhibit of home-made equipment from the farms of Manitowoc County included 38 different items. The local prizes that were awarded by their active farm organization are listed below.

Schedule of Prizes for Farm Equipment Caravan, Manitowoc County

Power equipment (horse, tractor or auto operated)

- 1st prize, \$10 - garden tractor
- 2d prize, .5 - buck rake
- 3d prize, 3 - manure loader

Small power-driven labor savers

- 1st prize, \$5 - hay hoist
- 2d prize, 3 - drill press
- 3d prize, 2 - grain elevator

Non-power-operated labor savers

- 1st prize, \$5 - potato sacker
- 2d prize, 3 - feed cart
- 3d prize, 2 - crotch ladder

House and home labor savers

- 1st prize, \$5 - meat grinder
- 2d prize, 3 - garden cart
- 3d prize, 2 - rag holder

Distribution of Materials

In order to facilitate requests for plans, each county extension office maintained a desk or booth where farmers could leave their names and addresses, ordering the plans and information they needed.

This was carried out in various ways in the various counties, but in all cases the farmers were instructed over the microphones as to where they could make their requests for plans. It was against regulations to distribute plans or mimeographed material at the caravan because of the waste of such materials in that manner.

Summaries of the lists were sent from the county office to the State office. From there they were cataloged and plans were mailed to the county, rather than to the individual making the request. Long lists of requests in each county expressed the interest of the farmers in the materials shown in the caravan.

Results

Like many projects, it is difficult to measure the results of the labor-saving and safety caravan in dollars and cents. Interest, however, has considerable significance, we believe. Over 60,000 people visited the shows and thousands made requests for plans and specifications.

Hundreds of other people, talking among themselves or with their neighbors, indicated how they were going to change some item to make it fit their own conditions. Six months later we have folks telling us just how they made pieces of equipment as a result of the labor-saving and safety caravan.

The mimeographed material made available on these items and demanded in large quantities indicates results of such an exhibit. Farmers seldom exert sufficient effort to order a plan or to get information unless they have intentions of doing something about it.

This was carried out in various ways in the various countries, but in all cases the results were satisfactory and the progress was rapid. It was found that the most effective way of carrying out the work was to have a small number of people working in the field, and to have a large number of people working in the office. This was done in all the countries, and the results were very good.

Attention of the State was given to the work of the State Office. It was found that the work of the State Office was very important, and that it was necessary to have a large number of people working in the office. This was done in all the countries, and the results were very good.

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